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PROGRESS REPORT ON REESTABLISHMENT OF THE MOJAVE CHUB, *GILA MOHAVENSIS* (SNYDER), AN ENDANGERED SPECIES

The Mohave chub, *Gila mohavensis,* once found extensively in the Mohave River and its tributaries, is the only native fish known to the Mohave River drainage (Hubbs and Miller 1943). Pure strains of these chubs have steadily declined since about 1938, with the introduction of the arroyo chub, *Gila orcutti,* which resulted in competition and hybridization between the two species. They had been completely eliminated in the main river by 1967 (Miller 1967). Until recently the Mohave chub was found only in Lake Tuendae at Zzyzx Resort south of Baker, California.

The population in Lake Tuendae is flourishing, but is in a precarious condition due to the present undetermined ownership of the property on which the lake is located. In 1969, following the recommendations of Miller (1967), the California Department of Fish and Game began transplanting the chubs to additional refugiums from Lake Tuendae. Three locations, Piute Springs, South Coast Botantic Garden Pond, and Two Hole Springs, have been planted to date. A brief summary of the introductions follows.

Piute Springs

Piute Springs, San Bernardino County, is located on Bureau of Land Management land northwest of the town of Needles, California. The spring lies at the bottom of a canyon and is sometimes subjected to flash floods. On December 18 and 19, 1969, Messrs. L. Fisk, E. Lesh, D. Frye, and R. Winn all with this Department, introduced 150 Mohave chubs into Piute Springs. The chubs averaged about 3.5 inches in length.

An inspection of Piute Springs this winter did not reveal any chubs in the streams. A flood that occurred after the introduction may have eliminated them.

South Coast Botanic Garden Pond

This 2-acre pond constructed at the South Coast Botanic Garden in Palo Verdes, California is managed by the Los Angeles County Department of Arboretum and Botanic Gardens. The authors introduced 147 Mohave chubs into the pond on January 27, 1970. The chubs measured approximately 1.5 to 2 inches in length, with the exception of 5 fish that were 4 to 7 inches.

On July 2, 1970 we observed that 3 different spawnings had apparently occurred.

Two Hole Springs

This spring is located in San Bernardino County on Bureau of Land Management land, 1 to 2 miles south of Old Woman Springs Road east of Lucerne Valley, California. Maximum depth of the pool formed by the spring is 2 ft. On August 20, 1970, Messrs. J. St. Amant, E. Lesh, and Bureau of Land Management personnel, W. Templeton and R. Manus, planted 41 chubs into the pool. Average length of the chubs was approximately 2 inches; several measured approximately 4 inches. Mr. Templeton, prior to the introduction, constructed a fence around the 30- by 40-ft pool to keep cattle out.

Future plans for management of *G. mohavensis* include the periodic inspection of Piute Springs and Two Hole Springs. If additional introductions are necessary, chubs from the South Coast Botantic Garden will be transplanted to these sites. The South Coast Botantic Garden will be used as a source for additional introductions when suitable refugiums are located. An introduction will be made into Lark Seep located on the United States Naval Weapons Station, China Lake, California.

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